

when channel meanders cut into the valley walls. Vegetation on these cut banks is typically sparse. A knickpoint exists about 100 m below the confluence of the Middle Fork and the easternmost fork. The bed above the knickpoint is a cemented glacial till consisting of gravel encased in a hard, yet erodible, clay matrix. The bed drops about 0.5 m crossing the knickpoint to a cobble bedded channel, and undercuts a bare, high terrace slope that contributes a significant amount of sediment to the channel during high flows.

The eastern fork reach, upstream from its confluence with the Middle Fork (Hotspots 17 to 21, Table 4-8), transitions from a boulder/cobble bed to a bedrock controlled channel. Banks are steep with essentially no sediment available for erosion (Figure 4-22). However, near the Barker Pass Road crossing, the channel banks are covered by a layer of colluvial material with a high silt/clay content.



**Figure 4-22. Bedrock channel with a “low” fine sediment rating typical of the canyon reach of Blackwood Creek.**

### Summary

Grain size analysis of bed and bank materials indicate that the overall silt/clay content of the bed makes up essentially 0% of the bed material whereas the measured silt/clay content of the banks varied from 1 to 13% (average of 6%). The lower clay/silt materials typically came from fluvial or glacial outwash deposits whereas the higher clay/silt percentages typically came from side slopes where the stream channel was cutting into the valley wall. This is reflected in the spikes in the channel-stability index between km 5 and 7 (Figure 4-26 B) and in the “high” rating along the same reach in Figure 4-23). Overall the channel tends to become more stable moving upstream with scattered peaks until river km 7.2 (Figure 4-26 A, B, C and D) where the overall fine-sediment availability from the channel drops to low (Figure 4-23) with the exception of just downstream of the Barker Pass Road crossing (river km 8.1 Figure 4-23).